thanks are due. Our profession still contains those who scoff at polygrams and electrocardiograms as fancy adjuncts to medicine but they have served their purpose well and the scoffers are among those who know least about the pathological physiology of the heart. Those who have interested themselves in this work appreciate the great step that has been made and those who would be anxious to get a more intelligent conception and greater therapeutic efficiency in the handling of heart disease should follow assiduously the work along these lines that is now going on. H. I. W.

THE ETHER-RAUSCH ALONE.

Although the easier and more rapid means of transportation and communication, and the constant stream of travel are making medicine more and more cosmopolitan, there seem still to exist some few appliances and methods peculiar to certain countries. The Kelly obstetrical pad, for instance, is distinctively American. We have never seen this admirable appliance used either in Great Britain or on the continent of Europe.

In the *Journal of the A. M. A.* for July 1st, W. T. Coughlin describes a form of ether anaesthesia which he happened to see in Leopold's clinic in Dresden, called the "Aetherrausch" and first described by Sudeck of Hamburg.

The "ether-rausch" may be known in Canada—Mackay says it is in a note on Coughlin's paper in a later number of the JOURNAL—but it does not seem to be known or used in this country;—and yet it is the anaesthesia *par excellence* for the clinic, for the office, for private practice, wherever, in fine, a short anaesthesia is needed and gas is not at hand. It is used a thousand times a day throughout Germany, and a death or an untoward accident under its use has never been reported. It takes but two or three minutes to induce, carries with it no post-operative vomiting or malaise, and its effects pass off in ten or fifteen minutes.

It has, however, its limitations: it is a short anaesthesia and incapable of prolongation; it gives complete analgesia but not complete muscular relaxation, so that it cannot be used for setting a fracture or for reducing a dislocation.

In principle the "ether-rausch" depends upon a quick momentary saturation of the blood with ether. The technique is as follows:

First. Remember the anaesthesia is a short one, prepare the patient *completely,* and get *everything* ready to your hand—instruments, sutures (needles ready threaded) disinfectants, drains, dressings, splints,—if you have to stop to hunt for a dressing the patient will be awake before you know it.

Second. Saturate an old-fashioned, large ether mask with 50 to 75 c. c. of ether—a Juillard mask covered with 8 layers of gauze inside and with oiled silk outside is the best, but an ordinary ether mask above which are placed two towels folded so as to make 8 layers will do. Tell the patient to hold one arm up in the air, and to breathe deeply, with forced inspirations. After he has taken five or six deep breaths advance the mask, holding it two or three inches above the face at first. The face soon begins to flush, the respiration to deepen;—now apply the mask closely, so as to let the patient breathe the concentrated ether vapor;—two or three more breaths and the arm which the patient was holding elevated will drop. This is the signal to begin; the anaesthesia is now complete, operate and carry your work *through* quickly, dressings and all, without a stop. Don't begin before the anaesthesia is complete. If the course of giving the anaesthetic is interrupted by pain the patient will begin to struggle and a further continuance of the narcosis will be impossible.

The mask should be removed from the face a minute after the patient is well "under"—after the painful part of the operation, the incision or the packing, is over. The room should be absolutely quiet throughout the whole procedure. The patient will then lie in a doze or stupor for four or five minutes after the mask is removed. When he awakes he presents the typical appearance of a drunken man—sits up with a flushed face and stupid leer, and laughs hilariously, or weeps—or does both at once.

Sudeck's "ether-rausch" has been a boon to many a German practitioner; it deserves that we should know it and practice it.

SOME DONT'S IN VACCINE THERAPY.

From time to time one hears the "vaccine" treatment of certain skin diseases adversely criticized by physicians who have been disappointed with their results. During the past six years the writer frequently has seen patients who previously had been given vaccines by their physicians in an empirical manner, with the inevitable bad result and the consequent discrediting of the method. It is to those who have been disappointed with their results that the following "don'ts" are respectfully dedicated in the hope that their due observance may be the means of preventing some future failures. The writer bases the following on considerable personal experience and success with the method and reports from other practitioners.

Do not expect to see good results unless vaccines are used in accordance with certain established rules,—only disappointment can result from empiricism.

Do not use vaccines to the exclusion of all other methods.

Do not use an emulsion over three months old.

Do not use a monovalent stock vaccine if a polyvalent preparation can be obtained and do not use either if an autogenous vaccine is available.

Do not overwhelm the patient at first with too large doses, and do not increase the dosage too rapidly.

Do not inject too often—this is a common error which is responsible for many disappointments.

Do not inject vaccines in the treatment of the average case of acne, furunculosis or staphyloccia more often than once in seven or ten days. Be guided by the clinical signs.

Do not forget that during the two or three days immediately following a *proper* injection the negative phase is present and that during this phase lesions should not be manipulated or interfered with in any way. Usually after the fourth day (if the dosage has not been excessive) the positive phase begins to develop, and then local treatment can be carried on advantageously.

Do not forget that much manipulating of the lesions can have an effect similar to an injection and in that way can complicate the negative phase.

Do not fail to observe that a marked increase in lesions during the first two or three days following an injection is evidence that too large a dose has been injected or the lesions themselves have been interfered with, or both.

Do not repeat the injection for some time if the negative phase (as shown by objective signs) persists,—and then when the injections are again resumed proceed cautiously with small doses.

Do not use the same region for repeated injections,—change the site often.

Do not condemn the method if your results do not equal your expectations, but carefully determine whether or not you have carried it out properly, and you will probably find some error in your technique. HARRY E. ALDERSON.

IS CHEAP WORK POOR WORK?

In the July number of this Journal, under the heading, "Cheap Work, Poor Work," we had something to say in regard to the "Pacific Wassermann Laboratories." In this article we referred to the biblical statement that "the laborer is worthy of his hire," and from that deduced the proposition that cheap work is usually poor work. Exception has been taken to this statement by George Gilman, Esq., connected with the laboratory in question, and he states that he possesses several degrees, and has studied in the foremost universities the special objects connected with the class of work he is doing. We are glad to learn this, and we at the time of writing the first article had no knowledge of the ability or lack of ability of the persons operating the laboratories in question, but we deduced from the list of prices, and the biblical authority above stated, that the work there performed could not, for those prices, have been based on a scientific and competent opinion. Nothing in that article was intended to reflect upon the ability of Mr. Gilman or any other person connected with the "Pacific Wassermann Laboratories," but men having the ability which they claim should certainly charge a fairer price for their services, for the rates quoted are not, in our opinion, a fair compensation for such examinations when performed by men capable of performing them in a scientific manner.

ORIGINAL ARTICLES

CLINICAL OBSERVATIONS ON MIGRAINE.*

By HERBERT C. MOFFITT, M. D., San Francisco.

It is a pleasure in this gathering of specialists once again to acknowledge the great debt of the clinician to ophthalmology. No medical student of to-day should leave school and hospital without command of the methods of eye examination,—the ophthalmoscope to the internist is as indispensable as the stethoscope. But during incursions into the borderland of your activity the clinician not infrequently has chance to observe that the specialist, early in his career, builds too high a fence about his preserves and cuts off his view of the general broad field. A proper training in clinical medicine and neurology is essential to the interpretation by the ophthalmologist of many pupillary, muscle and fundus phenomena; the judicial habit of mind acquired at the bedside will curb tendencies toward narrow specialism and keep in check the enthusiastic advocate of eye strain as a source of all evil.

The few minutes at my disposal can serve only to emphasize how little we really know about migraine, an old personal foe of many of us, the commonest form of headache with which we have to deal. My observation, fairly wide, confirms the view of most clinicians—that migraine is a definite disease of the brain. It is true the changes in the nerve cells answerable for the peculiar periodic discharges as yet escape detection, and will probably long defy our analysis; they are in the great majority of instances inherent,—in other words migraine is most often an inherited affection. The migraine tendency (Moebius) may be so deeply stamped upon the brain that the individual in question, no matter how free from the baleful influences of infection, organic irritation or disease, and how far removed from the cares and struggles of ordinary life, may periodically suffer from partial or severe attacks. In others with impression less strongly marked the tendency lies dormant until awakened by some infection, perhaps general, as typhoid or scarlatina, sometimes local, as in tonsils nasal sinuses, gall bladder, appendix, prostate or Fallopian tubes. Intoxications, alcohol, gastro-intestinal, nephritic, thyroidal—the continued irritation of nasal disease, of refractive errors, of abdominal adhesions, of abnormal sexual habits,—above all the daily friction, worry, excitement of modern existence—these influences may damage the normal nervous system; they intensify and may induce the attacks of migraine. Though in most cases this peculiarity of brain cells "the migraine tendency" is inherited, it may be acquired through injury of the nervous system by the varied factors just mentioned, or the phenomena of the disease may result from actual organic lesion of the brain or cord. The varied contributing causes must not be lost sight of in directing rational therapy but overenthusiastic treatment and prognosis must be governed by conservatism born of the knowledge that the essential factor here, as in epilepsy, is the perturbed brain cell.

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* Read at the Forty-first Annual Meeting of the State Society, Santa Barbara, April, 1911.